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EXAMINER

CLARK, ISAAC R

ART UNIT PAPER NUMBER

2154

DATE MAILED: 11/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/814,266

Applicant(s)

AL-KAZILY ET AL.

Examiner

Isaac R Clark

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-37 are presented for examination.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Priority

3. No claim for priority has been made in this application.
4. The effective filing date for the subject matter defined in the pending claims in this application is 03/21/2001.

Claim Rejections - 35 USC § 112

5. Claims 5, 15, 35 and 36 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 5 and 15 contains the trademark/trade names "e-speak". Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a specific type of online service and, accordingly, the identification/description is indefinite.

7. For the purpose of examining claims 5 and 15, the Office will assume that any electronic commerce service designated as 'e-speak' at the time the Applicant's invention was made will be interpreted as an 'e-speak' on line service.
8. The rejection of claim 11 under 35 USC 112, second paragraph is withdrawn in view of the Applicant's amendment.
9. As per claim 35, claim 35 recites the limitation "The system of claim 1". There is insufficient antecedent basis for this limitation in the claim because claim 1 does not recite a system.
10. Claim 36 is rejected based on its dependency on claim 35.
11. For the purposes of examining claims 35 and 36, claim 35 will be construed as depending from claim 20 rather than from claim 1.

Claim Rejections - 35 USC § 102

12. Claims 1-4, 6, 7, 9-14, 16, 17, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Vange et al. (hereinafter Vange) US 20020007404.
13. Vange was cited in the previous Office Action.
14. As per claim 1, Vange teaches a method for caching an online service on a local point of presence 206 (Fig. 2A; Paragraph 044); front end of intermediate server may be at POP), the online service being hosted on a remote host computer 210-212 (Fig. 2A), the method comprising:

receiving a request, at a local point of presence, to access an online service (Fig. A, Paragraph 0060);

determining if the requested online service is locally stored on the local point of presence (Paragraph 0064);

in response to determining that the requested online service is not locally stored, downloading the requested online service from a remote host computer hosting the requested online service (Paragraph 0064); and

storing the downloaded online service on the local point of presence (Paragraph 0064).

15. Claim 10 is an apparatus claim covering the same subject matter as claim 1.

Claim 10 is rejected on the same basis as claim 1.

16. As per claim 2, Vange teaches the method of claim 1 further comprising determining if the requested online service is downloadable by the local point of presence (Paragraphs 0026 and 0068).

17. As per claim 11, Vange teaches the computer readable storage medium of claim 10 wherein the computer hosting the computer instructions is a component of the local point of presence (Paragraph 0034).

18. Claim 12 is an apparatus claim covering the same subject matter as claim 2.

Claim 12 is rejected on the same basis as claim 2.

19. As per claim 3, Vange teaches the method of claim 1 further comprising executing the requested online service on the local point of presence (Paragraph 0033, database query executed on POP server).

20. Claim 13 is an apparatus claim covering the same subject matter as claim 3.

Claim 13 is rejected on the same basis as claim 3.

21. As per claim 4, Vange teaches the method of claim 1 wherein the requested online service is locally stored in cache memory (Paragraph 0064).
22. Claim 14 is an apparatus claim covering the same subject matter as claim 4. Claim 14 is rejected on the same basis as claim 4.
23. As per claim 6, Vange teaches the method of claim 1 wherein downloading the requested online service comprises downloading the online service object code (Paragraph 0026; Claim 10, lines 1-3).
24. Claim 16 is an apparatus claim covering the same subject matter as claim 6. Claim 16 is rejected on the same basis as claim 6.
25. As per claim 7, Vange teaches the method of claim 1 wherein downloading the requested online service comprises downloading data associated with the requested online service (Paragraph 0025).
26. Claim 17 is an apparatus claim covering the same subject matter as claim 7. Claim 17 is rejected on the same basis as claim 7.
27. As per claim 9, Vange teaches the method of claim 1 further comprising receiving one or more caching properties for a locally stored online service (Paragraph 0065).
28. Claim 19 is an apparatus claim covering the same subject matter as claim 9. Claim 19 is rejected on the same basis as claim 9.
29. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vange in view of Wray (US 20010023482).
30. Vange and Wray were cited in the previous Office Action.

31. As per claim 5, Vange does not teach the method of claim 1 wherein the requested online service conforms to e-speak specifications.

32. Wray teaches online E-Speak compliant services stored on a server (Paragraphs 0164). It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Vange and Rene Salle to produce a POP server caching e-speak services because they both deal with the location and delivery of online services upon a client request. Furthermore, the teaching of Wray to accommodate E-Speak compliant services would result in a caching system where the accessed services have specified handlers and security properties (Wray Paragraph 0161).

33. Claim 15 is an apparatus claim covering the same subject matter as claim 5. Claim 15 is rejected on the same basis as claim 5.

34. Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vange in view of Edwards et al. (hereinafter Edwards) US 6,591,288.

35. As per claim 8, Vange teaches the method of claim 1 further comprising:
maintaining an age limit for the requested online service (Paragraph 0065); and
in response to determining that the age exceeds the age limit, removing the locally stored online service from the local point of presence (Paragraph 0065).

36. Vange teaches that a variety of algorithms may be used to determine when a requested online service should be removed from storage at the local point of presence (Paragraph 0064). However Vange does not explicitly teach determining an age of the

requested online service locally stored on the local point of presence, the age being a time duration since the online service was last accessed.

37. Edwards teaches the method of claim 8 further comprising determining an age of the requested online service locally stored on the local point of presence, the age being a time duration since the online service was last accessed (Col. 7, lines 15-21). It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Vange and Edwards because they both deal with removing infrequently used online services from a cache. Furthermore, the teaching of Edwards of determining an age of the requested online service locally stored on the local point of presence, the age being a time duration since the online service was last accessed, would produce a cache system in which infrequently requested pages are removed from the cache making more room to accommodate frequently requested pages.

38. Claim 18 is an apparatus claim covering the same subject matter as claim 8. Claim 18 is rejected on the same basis as claim 8.

39. Claims 20, 28-31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vange in view of Burns et al. (hereinafter Burns) US 6,275,496.

40. Vange and Burns were cited in the previous Office Action.

41. As per claim 20, Vange teaches a service caching system for locally storing a requested online service, the online service being hosted on a remote host computer, the system comprising:

means for receiving a request to access an online service (Paragraph 0060);

means for determining if the requested online service is locally stored on the local point of presence (Paragraph 0064);

in response to determining that the requested online service is not locally stored, a means for downloading the requested online service from a remote host computer hosting the requested online service (Paragraph 0064); and

means for storing the downloaded online service on the local point of presence (item 207, Fig. 2A; Paragraph 0064).

42. Vange does not teach a means for maintaining a record of a plurality of online services locally stored on a local point of presence.

43. Burns teaches the system of claim 20 wherein the system comprises a means for maintaining a record of a plurality of online services locally stored on a local point of presence (Col. 8, lines 41-46). It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Vange and Burns because they both deal with caching remote online services at the local service provider. Furthermore, the teaching of Burns to maintaining a record of a plurality of online services locally stored on a local point of presence would provide a database of usage patterns that would allow the local service provider to tune the cache system to accommodate resources requested most frequently by subscribers (Burns Col. 8, lines 49-53).

44. As per claim 28, Vange teaches the system of claim 20 further comprising determining if the requested online service is downloadable by the local point of presence (Paragraphs 0026 and 0068).

45. As per claim 29, Vange teaches the system of claim 20, further comprising means for executing the requested online service on the local point of presence (Paragraph 0033, database query executed on POP server).

46. As per claim 30, Vange teaches the system of claim 20, wherein the means for downloading the requested online service comprise means for downloading the online service object code (Paragraph 0026; Claim 10, lines 1-3).

47. As per claim 31, Vange teaches the system of claim 20, wherein the means for downloading the requested online service comprise means for downloading data associated with the requested online service (Paragraph 0025).

48. As per claim 33, Vange teaches the system of claim 20, further comprising means for receiving one or more caching properties for a locally stored online service (Paragraph 0065).

49. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vange and Burns as applied to claim 20, in view of 'Official Notice'

50. As per claim 21, Vange teaches downloading the program code, web page components, graphics, and databases associated with an online service (Paragraphs 0024 and 0033). Vange also explicitly teaches downloading the data associated with an online e-commerce service (Paragraph 0032).

51. Vange fails to explicitly teach that the online service comprises one or more of an electronic business card service, an electronic travel reservation service, an electronic retail service, and an electronic calendar service.

52. The Office takes 'Official Notice' of the fact that e-commerce services such as electronic travel reservation services and electronic retail services were well known in the art at the time the Applicant's invention was made. It would have been obvious to one of ordinary skill in this art at the time the invention was made to use the system taught by Vange and Burns to download the components of an electronic reservation service, an electronic retail service, or other e-commerce service to a cache server because caching the service would allow distributing the server load when shopping cart process created a high burden (See Vange Paragraph 0032).

53. Claims 22-24, 34 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vange as applied to claims 1 and 20 above in view of Tucker et al. (US Published Application 2004/0049598) hereinafter Tucker.

54. As per claims 22 and 23, Vange teaches determining whether the online service is locally stored (Paragraph 0064), but fails to explicitly teach that the step of determining if the requested on line service is locally stored comprises checking service cache records for a service cache record associated with the requested online service for an indication that the requested online service is locally stored.

55. Tucker teaches maintaining an index of cached content indexed by an identifier associated with the online service (Paragraph 0034). Tucker teaches checking the index to determine whether the content is available in the cache (Paragraph 0034).

56. It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Vange and Tucker to use a services caching system which maintains a record of which services have been locally stored

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because they both deal with caching of online content. Furthermore, the teaching of Tucker to maintain an indexed list of cached content would facilitate making the cached content available upon future requests for the same content (Tucker, Paragraph 0034).

57. As per claim 24, Vange fail to explicitly teach the method of claim downloading the requested service occurs in response to a service cache record associated with the requested online service being found but no indication that the requested online service is locally stored being found in association with the service cache record.

58. Tucker teaches that the service cache record may indicate that the content is cached, but that the content has expired or that the content is not in the cache, and that in either event the content is downloaded (Paragraph 0032-0033).

59. It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Vange and Tucker to use a services caching system which downloads the requested online service when a record is found that contains no indication that the content is locally stored because they both deal with caching of online content. Furthermore, the teaching of Tucker to check whether content has expired would allow the cache system to replace downloaded, expired content with content other recently requested content.

60. As per claim 34, Vange teaches the system of claim 20 including the means for determining that the requested online service is locally stored (Paragraph 0064), but fails to explicitly teach that the means for determining if the requested online service is locally stored comprise means for checking service cache records for a service cache record associated with the requested online service and for checking the service cache

record associated with the requested online service for an indication that the requested online service is locally stored.

61. Tucker teaches maintaining an index of cached content indexed by an identifier associated with the online service (Paragraph 0034). Tucker teaches checking the index to determine whether the content is available in the cache (Paragraph 0034).

62. It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Vange and Tucker to use a services caching system which maintains a record indicating whether a service has been locally stored because they both deal with caching of online content. Furthermore, the teaching of Tucker to maintain an indexed list of cached content would facilitate making the cached content available upon future requests for the same content (Tucker, Paragraph 0034).

63. As per claim 35, Vange teaches the system of claim 34 wherein the means for downloading the requested service acts in response to a service cache record associated with the requested online service being found but no indication that the requested online service is locally stored being found in association with the service cache record (Paragraphs 0063-0064; when content is not within the cache, request is passed to server and stored in cache).

64. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vange and Burns as applied to claim 20 in view of Edwards et al. (hereinafter Edwards) US 6,591,288.

65. As per claim 32, Vange teaches the system of claim 20 further comprising:

means for maintaining an age limit for the requested online service (Paragraph 0065) and in response to determining that the age exceeds the age limit, means for removing the locally stored online service from the local point of presence (Paragraph 0065).

66. Vange teaches that a variety of algorithms may be used to determine when a requested online service should be removed from storage at the local point of presence (Paragraph 0064). However Vange does not explicitly teach determining an age of the requested online service locally stored on the local point of presence, the age being a time duration since the online service was last accessed.

67. Edwards teaches determining an age of the requested online service locally stored on the local point of presence, the age being a time duration since the online service was last accessed (Col. 7, lines 15-21).

68. It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Vange and Edwards because they both deal with removing infrequently used online services from a cache. Furthermore, the teaching of Edwards of determining an age of the requested online service locally stored on the local point of presence, the age being a time duration since the online service was last accessed, would produce a cache system in which infrequently requested pages are removed from the cache making more room to accommodate frequently requested pages.

69. Claims 25, 26, 36, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vange in view of Adrangi (US Patent 6,651,141).

70. As per claims 25 and 26, Vange fails to teach the method of claim 1 further comprising determining what components of the requested online service to request and download prior to downloading the requested service by checking service cache records that include caching properties entries that indicate which portions of an online service can be locally stored.

71. Adrangi teaches maintaining a table the records of which identify requested content and which contain a parameter "popularity" which determines whether the online service should be cached (Fig. 5A, table 500; col. 5, lines 45-55). Popularity can be determined from the type, size, and characteristics of the involved files (col. 6, lines 24-63).

72. It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Vange and Adrangi to maintain a record describing what content may be cached prior to downloading an online service because they both deal with caching of online content. Furthermore, the teaching of Adrangi to determine which online components can be cached prior to downloading would prevent the cache from being filled with non cacheable content thereby preserving cache space for content that can be effectively stored for future use (Adrangi, col. 1, lines 55-64).

73. As per claims 36 and 37, Vange fails to teach the system of claim 20, further comprising means for determining what components of the requested online service to request and download prior to downloading the requested service by checking service cache records that include caching properties entries that indicate which portions of an online service can be locally stored.

74. Adrangi teaches maintaining a table the records of which identify requested content and which contain a parameter "popularity" which determines whether the online service should be cached (Fig. 5A, table 500; col. 5, lines 45-55). Popularity can be determined from the type, size, and characteristics of the involved files (col. 6, lines 24-63).

75. It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Vange and Adrangi to maintain a record describing what content may be cached prior to downloading an online service because they both deal with caching of online content. Furthermore, the teaching of Adrangi to determine which online components can be cached prior to downloading would prevent the cache from being filled with non cacheable content thereby preserving cache space for content that can be effectively stored for future use (Adrangi, col. 1, lines 55-64).

76. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vange in view of Touboul (US Patent 6,167,520).

77. As per claim 27, Vange teaches the method of claim including determining if the requested online service is downloadable (Paragraphs 0026 and 0068), but Vange fails to explicitly teach that the determining if the requested online service is downloadable comprises checking a service cache record for an online service ID associated with the requested online service, wherein if the requested online service ID is not listed in the service cache record, the online service is not downloadable by the local point of presence.

78. Touboul teaches maintaining a record of which services are downloadable indexed by an ID for the particular service and checking the records associated with the requested ID to determine whether the service is downloadable wherein if the requested service ID is not listed in the record, the online service is not downloadable (col. 6, lines 52-58; URL for service used as the ID. Content indicated as not downloadable if it is not indicated to come from a trusted source).

79. It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Vange and Touboul because they both deal with downloading online content. Furthermore, the teaching of Touboul to determine whether a service to be non downloadable by finding an absence of an ID for the service would allow explicitly indicating which components can be securely downloaded to the cache (Touboul, Abstract).

Response to Amendment

80. Applicant's arguments for claims 1-20 filed on 08/20/2004 have been fully considered but are not persuasive.

81. In response to the rejection of claims 5 and 15 under 35 USC 112, the applicant argues that e-speak is not used in a trademark sense but in a general descriptive sense to refer to a specific platform.

82. The Examiner respectfully traverses the Applicant's remarks.

83. E-speak is registered to Hewlett Packard as a trademark. The term e-speak is ineffective to prescribe a specific platform as the trademark owner is free to change the specifications of products referred to by e-speak. As explained above, where a

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trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982).

84. In response to the rejection of claims 1-20 under 35 USC 102 and 35 USC 103, the applicant argues in substance that the cited prior art (Vange) does not read on the claims because the cited prior art discloses caches web pages and not online services. The applicant further argues that online services are distinguishable from web pages because downloading services includes downloading and storing of executable programs required to facilitate running the service from a POP while the cited references do not teach downloading supporting programs or running service.

85. The examiner respectfully traverses the applicant's remarks.

86. Vange describes caching the components of a service including web pages and associated components such as files, graphics, multimedia files, and program code as part of caching the service (Paragraph 0024). Thus Vange teaches downloading supporting facilities along with the HTML code of the web page. In addition, the Examiner argues that the hosting of static or dynamic or static web pages constitutes an online service by providing information to those accessing the web page. Downloading the web page from a first host to a second host thus constitutes downloading a service from the first host to the second. The Applicant's remarks admit that Vange does teach the caching of web pages.

87. In response to the Applicant's argument that the cited references do not teach running the online service from the POP, the Applicant is reminded that it is the claims that define the claimed invention, and it is claims, not specifications that are anticipated or unpatentable. *Constant v. Advanced Micro-Devices Inc.*, 7 USPQ2d 1064. The Applicant cites the specification to show the steps of downloading programs that facilitate running the service and of running the downloaded service, but these steps are not recited in the claims.

Conclusion

88. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to show the state of the art with respect to "System and method for service caching on demand".

- | | | | |
|------|-----------------|--------------------|--|
| i. | US 6,240,447 | Banga et al. | Expiration of
cached web pages |
| ii. | US 6,529,955 | Sitaraman et al. | Database
maintained list objects in cache indexed by service identifier |
| iii. | US 6,330,605 | Christensen et al. | Caching of online
services at a local host |
| iv. | US 2002/0087798 | Perincherry et al. | Determining
whether an object should be cached |

89. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac R Clark whose telephone number is (571)272-3961. The examiner can normally be reached on Monday-Friday 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on (571)272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

lrc

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